CITY OF LODI
INFORMAL INFORMATIONAL MEETING
"SHIRTSLEEVE" SESSION
CARNEGIE FORUM, 305 WEST PINE STREET
TUESDAY, NOVEMBER 27, 2001

An Informal Informational Meeting ("Shirtsleeve" Session) of the Lodi City Council was held Tuesday, November 27, 2001 commencing at 7:02 a.m.

A. ROLL CALL

Present: Council Members – Hitchcock (arrived at 7:03 a.m.), Howard, Land, Pennino (arrived at 7:03 a.m.) and Mayor Nakanishi

Absent: Council Members – None

Also Present: City Manager Flynn, City Attorney Hays, and City Clerk Blackston

B. CITY COUNCIL CALENDAR UPDATE

City Clerk Blackston reviewed the weekly calendar (filed).

C. TOPIC(S)

C-1 "Lockeford Street storm drain"

Public Works Director Prima noted that staff submitted a preliminary report (filed) to Council regarding the drainage problem on West Lockeford Street. One of the recommended actions in the report is to modify the gate structure at Glaves Park, which is scheduled to take place tomorrow.

Walley Sandelin, City Engineer, recalled that the Lockeford Street problem came to his attention last summer when he spoke with resident Judy Kosaka who had informed him that flooding occurred each winter. Mr. Sandelin explained that design standards have changed since the area around Lockeford Street was developed. The elevation differential in this area between the street, curb, gutter, sidewalk, and garage is minimal. In conventional design it approaches 1 ½ to 2 feet. Tomorrow work is planned to lower the gate by one foot that controls when water empties into Glaves Park. Another area of improvement will be reviewing the analysis of the design criteria for the pump station at Lodi Lake. Currently there are three pumps at the station and room to add up to seven. Staff also plans to look at modifying the cross functionality of the Park West drainage system with the rest of the system. The ability exists to isolate the Park West drainage from the pump station at Lodi Lake.

In response to questions by Council Member Hitchcock, Mr. Sandelin explained that as water flows and depth increases in the pipe it reaches the height of the gate at the park and then automatically spills from the pipe into the park. Staff plans on lowering the gate by one foot allowing water to enter the park sooner. It will also take more water out of the system and store it so that the pump station does not have to work as hard. Mr. Sandelin stated that very rarely are the drainage basins full.

Council Member Land displayed a photo that a resident had given him showing flooding on Applewood Drive and Paradise, which backs up to the drainage basin.

Mr. Prima explained that the photo depicts the April 20 storm, in which there was a particularly heavy rainfall. He stated that landscapers now install drains that connect to roof leaders, allowing water to immediately run into the street and intensifying the City's storm water problems.

Council Member Land stated that it has been brought to his attention that on some east side properties, owners have made their own driveways, which obstructs the water flow.

Mr. Prima acknowledged that this has occurred and noted that at one time such practices were not regulated; however, it is now prohibited.

Council Member Land asked what the condition of Lockeford Street was during the recent rains.

George Bradley, Street Superintendent, replied that to his knowledge there was no flooding on Lockeford Street and only minor flooding in other areas as a result of leaves in the catch basins.

Mr. Prima reported that the Lodi Lake pump station was designed in the 1960s. There is a pump bay that has spaces for additional pumps; however, the station itself was not built with the hydraulic capacity to handle that much extra water that additional pumps would be able to move. It would be a major project to expand the entrance to the pump station to make it work properly.

In response to Council Member Hitchcock, Mr. Prima stated that the cost of a pump is approximately $25,000. Electrical panel upgrades would cost an additional $20,000 to $30,000. In total the project could cost $200,000. The 8" pipes in the area also need to be replaced. Staff needs to do measurements at Mills Avenue this winter during storm events to determine whether other improvements that would take care of flow on Lockeford Street are feasible. Modifications of the pump station will then be considered and placed in the next budget. Subsequent to that the 8" pipes will be replaced as part of the replacement program. Mr. Prima estimated that all three of these improvements could take place in a two- to three-year period.

Mayor Pro Tempore Pennino stated that he was not willing to authorize $200,000 to $300,000 for the pump station improvements unless it is needed long range. As the City grows to the southwest, it may not be needed. He encouraged staff to look at all alternatives.

PUBLIC COMMENTS:

- Judith Schultz stated that she owns the mill at 730 N. California Street and has a flooding problem in front of the commercial buildings on the property. Ms. Schultz stated that she has asked the City to make corrections for the past six years without success. Five or six years ago the City placed a drain system in the alley; however, there is nowhere for the water to go and it pools in front of her doorway.

- Treacy Elliott stated that the problem on Lockeford Street is not solely the volume of rain – it is the volume of rain in a short period of time. He believed that the improvements the City plans to make to the pumps and gates will not solve the problem, because it originates from the inadequately sized 8" pipes. He stated that there is an open field at Mills Avenue and Lockeford Street, which serves as a watershed; however, it will soon be under construction. Mr. Elliott pointed out that Lockeford Street is highly traveled. The response time for City staff to block off the street has been two to three hours. Cars driving through the water cause a lot of the damage to the properties.

- Bob Johnson, speaking as a Parks and Recreation Commissioner, pointed out that the Parks Department relies on the ponding basins for many of its activities. He asked whether it should begin planning for additional and longer flooding in the parks with ponding basins.

Mr. Prima acknowledged that the water will get into Glaves Park sooner than it has before and more frequently. The ability to drain it out remains the same.

In response to Ms. Schultz' concern, Mr. Prima explained that the buildings in that area are level with the alley and the street. There are very few drainage pipes to carry water

away. Part of the utility replacement program will be to look at drainage in the alley. He noted that the area was built well in advance of drainage design standards.

Mayor Pro Tempore Pennino emphasized the need to adhere to the replacement program and make improvements to areas that are in the greatest need first. He inquired whether staff has inspected the Lockeford Street 8" pipes with the TV camera.

Mr. Bradley reported that staff runs the sewer cleaner through the line every year and any time there is flooding. This process would also determine whether there was a blockage.

Mr. Prima also noted that staff will be looking at a third drainage area at Main Street and Lodi Avenue.

In response to Council Member Hitchcock, Mr. Prima stated that approximately four acres of DeBenedetti Park was reduced from what would have been a neighborhood park area along Century Boulevard extending to Mills Avenue. That portion was never intended to be part of the drainage system. The drainage basin at DeBenedetti Park has not yet been designed; however, staff has considered a tiered design that would have an extremely deep portion of the basin with a water quality feature that would help treat storm water naturally before it was discharged. This area would catch the first flow that comes into the basin. A second level, somewhat higher, may flood every five to ten years and a third level would flood under the 100 year storm criteria. The Park West drainage system was designed in the late 1970s to early 1980s and that time landscapers were not installing drains connected to roof leaders.

Council Member Howard pointed out that heavy rain is forecasted for the next few days. She asked that staff place appropriate road blocks on Lockeford Street in a more timely manner to address Mr. Elliott's concerns.

COMMENTS ON NON-AGENDA ITEMS:

- Council Member Howard stated that she was surprised by a newspaper article published last weekend indicating that a decision had been made regarding the New Shanghai building. It was her understanding that the matter had been pulled from a previous City Council agenda for the purpose of issuing Requests for Proposals (RFP).

  City Manager Flynn confirmed that no decision has been made on the New Shanghai building. RFPs will be reviewed in December and staff will be making a recommendation to Council at the second meeting in December or first regularly scheduled meeting in January.

  Council Member Howard stated that the article indicated that there was already a preference being made and supported by staff, if not Council. She expressed concern about this intimation and emphasized the need to be unbiased until the matter is placed on a Council agenda for a formal presentation.

D. COMMENTS BY THE PUBLIC ON NON-AGENDA ITEMS

None.

E. ADJOURNMENT

No action was taken by the City Council. The meeting was adjourned at 8:05 a.m.

ATTEST:

Susan J. Blackston
City Clerk

Mayor's & Council Member's Weekly Calendar

WEEK OF NOVEMBER 27, 2001

Tuesday, November 27, 2001

7:00 a.m. Shirtsleeve Session
1. Lockeford Street storm drains

10:30 a.m. The First Step Children's Center Groundbreaking, 540 N. California Street, Stockton.

1:30 - 4:30 p.m. Committee on the Future of Farming in California informational hearing in conjunction with the Assembly Select Committee on Rural Economic Development , Monterey Couthouse.

5:30 - 7:00 p.m. Grand Opening and Ribbon Cutting for The Studio, 2441 S. Stockton Street, Suite #5.

Wednesday, November 28, 2001

Thursday, November 29, 2001

12:00 p.m. Special Meeting (luncheon) to meet Senator Charles Poochigian, Hutchins Street Square.

4:30 - 5:30 p.m. Nakanishi. "Sponsor's Reception" for the Hospice Tree of Lights, Carnegie Forum.

5:30 p.m. Nakanishi. Hospice Tree of Lights, in front of City Hall.

6:18 p.m. Parade of Lights, Downtown Lodi.

Friday, November 30, 2001

Saturday, December 1, 2001

Sunday, December 2, 2001

1:00 p.m. Nakanishi, Land and Pennino. Dedication of Katzakian Park, 2735 W. Turner Road.

Monday, December 3, 2001

12:00 p.m. San Joaquin County Commission on Aging Christmas Luncheon Buffet, 102 S. San Joaquin Street, 5th Floor, Conference Room C, Stockton.

CITY OF LODI
Public Works Department

Preliminary Report

Lockeford Street
Storm Drainage Facilities

Prepared by:

Mark Lindseth, Associate Civil Engineer

November 2001

Preliminary Report
Lockeford Street Storm Drainage Facilities

Problem

There is an intermittent storm-related flooding problem on Lockeford Street, between Cross Street and Loma Drive. Mrs. Judy Kosaka, who lives in the 1600 block of West Lockeford Street, has brought this problem to the City's attention. Her residence is next to the low point in the street profile and catch basins. The extent and duration of the flooding has not been documented, however, George Bradley, our street superintendent, has stated the area may flood between two to six times a year. The water will fully cover the street, with a depth of two inches at the crown and 12 inches in the gutter. This will force water up onto the lawns and driveways. Mr. Bradley stated that although there did not seem to be a real predictability to the flooding, once the area had flooded, the water would stay for approximately two hours after the storms had passed.

Analysis of the Existing Drainage Facilities Serving the Flooding Problem Area

It would probably be helpful to identify the major facilities involved in the drainage of this area. Listed below are the five major elements of the system that effect this area's drainage. Please see the attached map for reference.

1. **B-2 Detention Basin** and inlet weir and flap gate drainage structure. Formerly known as Twin Oaks Park, now known as Glaves Park, this basin is located on Oxford Way, east of Lower Sacramento Road and north of Lodi Avenue. The main purpose of this basin is to store excess water that cannot be handled by the Lodi Lake Pump Station during peak storm flows. The basin's presumed tributary area is shown on the attached map. It should also handle the Lockeford flood problem area.
2. **E Detention Basin**, also known as Peterson Park. It is located at the intersection of Elm Street and Evergreen Drive. More generally, it is west of Lower Sacramento Road and north of Lodi Avenue. The main purpose of this basin is to store **all** of the peak "storm event" water

from the adjacent tributary area to the west of the B-2 area. This basin would eventually be drained by the Lodi Lake Pump Station only after the B-2 basin has been completely drained.

3. **E Area Gate Control Structure**, this was installed as part of the Lodi Park West Subdivision Unit #1 and is shown as Drawing #83D84. The structure is located at the southeast corner of the intersection of Lower Sacramento Road and Elm Street, in the frontage road median. The main purpose of this structure is to isolate the E tributary area from the B-2 tributary area during storm events.
4. **Shady Acres Pump Station** is located on Shady Acres Drive at the intersection of Cabrillo Circle. This station pumps directly into the Woodbridge Irrigation Canal that runs adjacent to the pump station. The main purpose of this pump station is to drain the B-1 tributary area, which is just south and east of the B-2 Area. These areas are linked together by large mains in both Mills and Lodi Avenues.
5. **Lodi Lake Pump Station** is located just west of Lodi Lake on Turner Road. Water is pumped directly into the Mokelumne River at the entrance to Lodi Lake. This is a large pump station servicing both E-1 and B-2 tributary areas. Its current maximum pumping capacity is between 60 and 70 cubic feet per second (cfs).

The drainage terminus for the Lockeford Street flood problem is the storm water pump station at Lodi Lake. The storm water pipes draining this area travel northward through several small subdivisions that were developed "piecemeal" throughout the 1950's and early 1960's. All of these small subdivisions add to the drainage that starts at the Lockeford Street problem area. There are no design calculations in the engineering files that show how this area should function during a particular storm event. However, by the City's current design criteria, most of the pipes serving this area are undersized and some localized flooding problems would be expected.

The Lockeford Street flooding problem area is also drained by another storm drainpipe that travels southward and ties into a 30-inch storm drain in Elm Street at Loma Drive. This line was installed in 1962. The terminus of the Elm Street storm drain is also the Lodi Lake Pump Station.

The Elm Street storm drain is also connected to the Shady Acres Pump Station through a 30-inch pipe flowing south in Mills Ave. Should there be capacity at this pump station, some water could flow south, although it was not designed to. Water may also flow northward up Mills Avenue at Elm Street and directly to the Lodi Lake Pump Station. In the event that there is no capacity southward or northward, water could flow westward past Glaves Park/Basin (B-2 Basin), north up Rutledge Drive to Turner Road, and then eastward along Turner Rd. to the Lodi Lake Pump Station. Glaves Park is supposed to act as overflow storage for water that cannot be handled by the Lodi Lake Pump Station. However, practice has shown that the basin may not be providing the flooding relief it was designed to due to the weir elevation at Glaves being too high (elevation 33.0). The Lodi Lake Pump Station was designed to handle a maximum flow of approximately 60 to 70 cfs at the pump station maximum water level of 30.5 feet in elevation. The estimated peak flow heading to the Lodi Lake Pump Station from the B-2 area is 120 cfs. Therefore, 50 to 60 cfs needs to be bypassed into Glaves Park at peak flows. With a 60 cfs flow over the weir at B-2 Basin, this could create a hydraulic grade line (water surface elevation) in the Lockeford Street flooding area of 42 to 43 feet. The top of curb elevation at that location is 41.9. This is likely one cause of the flooding and the noted duration of the flooding. The duration is long because the pipes are small and the system is submerged.

As a historical note, there are indications that early on, the drainage system in this area did not operate very well, as there were slide and flap gates on installed pipes in the area that were installed to force water to go in directions other than by gravity. These gate structures have since been abandoned or removed and no records show why these were installed or when they were removed.

Other points for consideration:

1. Older subdivisions were developed without grading plans. This generally means that the residential lots are flatter and lower to the street elevations and may be prone to flooding at times of peak flow.

2. The problem flooding area was developed from the 1930's through the 1950's when design and construction standards for drainage were significantly different than today and long before the detention basin concept was developed. The cost to replace the existing undersized drainage system for this area with pipe of the proper size and capacity would be in the range of $450,000.

Analysis of the Problem

The problem was to determine if the flooding was a small-localized issue that could be solved with some simple inexpensive local improvements, or if it was a symptom of a larger area wide problem requiring a different and perhaps more costly fix. Discussions with the maintenance people, who have responded to the flooding problem in the past, have indicated that the manholes downstream from the flooding were standing full of water, and the problem may be a capacity problem quite a ways downstream from the actual problem flooding. There were no records of which manholes were checked or how far downstream they observed the capacity problem. However, they could testify that manholes both north and south of the problem flooding area stood full of water to the rim. George Bradley also noted that he uses the slide gate that separates E basin and B-2 basin as a relief to the flooding problem on Lockeford Street. This action shuttles high water flows over to E basin instead of to B-2 basin. This relief action tended to limit the flooding on Lockeford Street, without this relief, the hydraulic gradeline of both the northerly and southerly drain lines for Lockeford Street are near the ground surface, in the area of flooding, during critical storm events. The continued use of E basin as a relief for the flooding at the Lockeford Street problem area could prove to be problem during back to back large storms.

Established Information

1. This is an interconnected system. Storms do not move across the City consistently or uniformly. Water may flow to different facilities at different times depending on storage or pumping system availability. Though this is actually what happens, the Storm Drain Design Standards assumes a consistent storm over a given drainage area.

2. The flooding problem seems to be intermittent and may happen only when there is a system wide capacity problem. Trial calculations that show flooding for this area assume that all the excess water that is not being handled by the Lodi Lake Pump Station will flow to the B-2 basin for temporary storage. The fact that this is an interconnected system precludes a full analysis without the use of a computer model. Perhaps this could be handled by a consultant who specializes in this type of work.

Next Steps

1. Lower the weir at B-2 Basin or partially open the flap gate to allow more timely use of the storage capabilities. We are proceeding with work to lower the weir by 12 inches.

2. Consider increasing the capacity at the Lodi Lake Pump Station. There is room for a future pump but the geometry of the inlet well and outlet wells may require some additional changes to the pump station.

3. Actually field-verify the extent of the flooding problem:

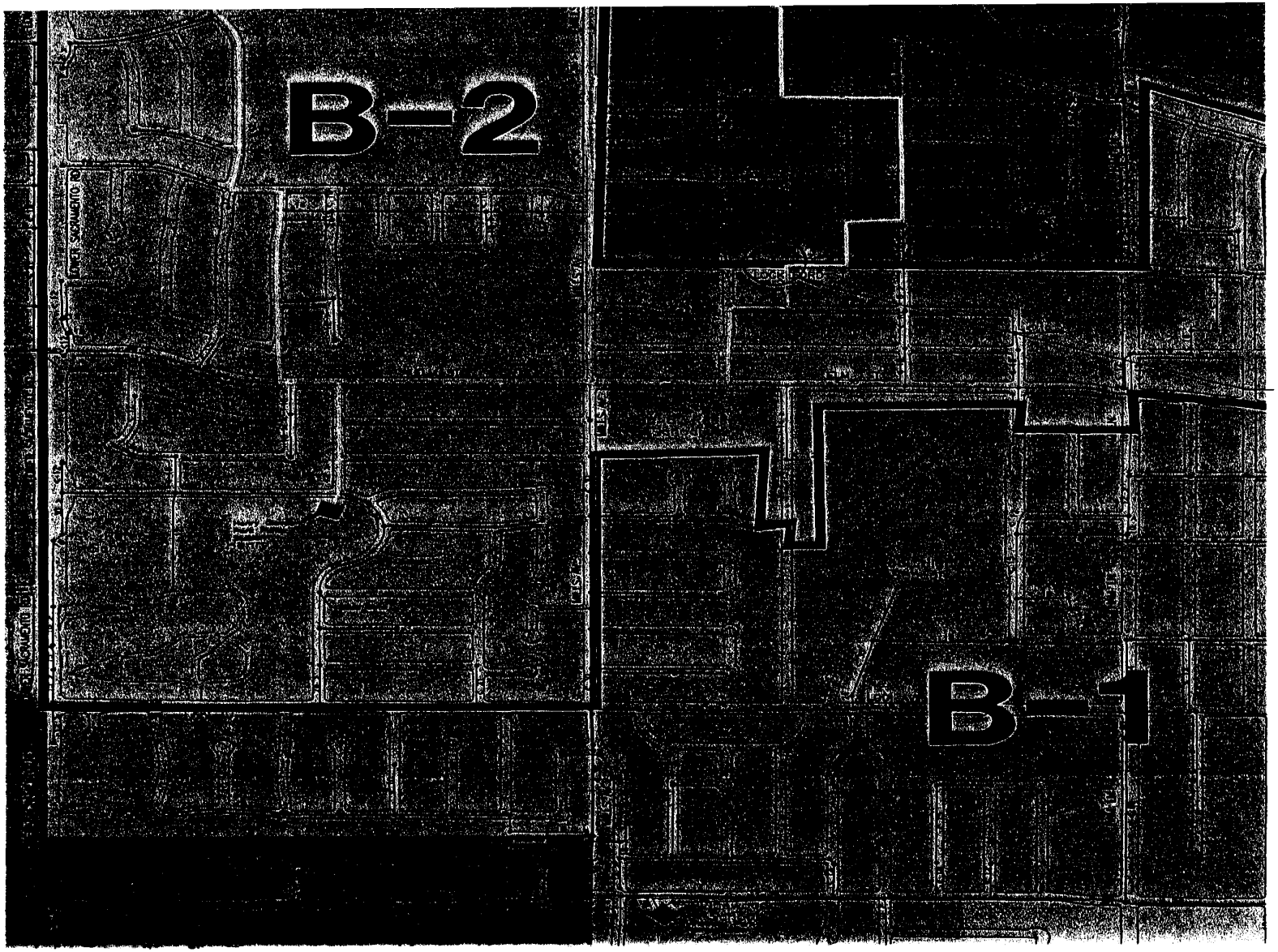
    - Verify standing water elevations in manholes around the problem area
    - Verify flows into B-2 Basin
    - Verify flow directions in the cross manhole at Elm Street and Mills Avenue
    - Verify flow and water elevation at the Lodi Lake Pump Station during flooding problem.

4. It may be possible to alleviate some of the problem by constructing a new storm drain line along Lockeford Street to Mills Avenue if there is capacity in that line.

5. It had been suggested to use the future school site on Mills Avenue at Lockeford Street for some localized storage, perhaps by lowering some of the play fields to create another local detention basin.

ML/pkh

Attachment



LEGEND:

DRAINAGE BASIN BOUNDARY

PIPE THAT DRAINS FLOODING AREA

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CITY OF LODI CALIFORNIA PUBLIC WORKS

1" = 700'

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